
Preface

According to an Italian saying, “Il mondo è fatto a scale, c’è chi scende e c’è chi sale,” or, in English translation: “The world is made like stairs: there are those who walk down and those who walk up.” While the proverb is meant to provide a fatalistic account of individual destinies, it can also be applied to innovations, medical or otherwise: some meet with success, others end in failure and are quickly forgotten. The saying, however, glosses over an important point: stairs do not generally consist solely of steps, they are regularly interrupted by landings or platforms marking each floor. Without these platforms, stairs would have no purpose nor would they exist qua stairs. In turn, platforms are not simply convenient resting places between steps; rather, they give access to apartments and living rooms. This book is about platforms and the rooms to which they give access.

Stairs and platforms in general follow simple paths. We prefer to think of them as in one of the famous Escher drawings where a number of stairs and platforms lead into each other without a clear sense of vertical hierarchy. In other words, we are not interested in linear paths, with well-established beginnings and ends, for we recognize the retrospective existence of multiple paths. In fact, we are not even interested in paths per se but, rather, in the materials and conventions that have been used to design them. We are interested in scattered platforms that interrupt paths and, often, launch them in new directions, providing for both continuities and discontinuities.

Our book analyzes *biomedical* platforms. For reasons that should become clear to readers, we do not think that there are social science platforms. This does not mean that we were able to complete this book without material and conceptual contributions from a number of social science sources. Let us start with financial support. Research for this book has been made possible by several grants. The Social Sciences and

Humanities Research Council of Canada awarded us two successive grants, on “Standards, Instruments and Techniques in the Biological and Biomedical Sciences” (1994–97) and on “Scientific Instrumentalities and the Transformation of Medical Judgment after World War II” (1997–2000). Since 1994, Quebec’s Fonds FCAR (now FQRSC) has provided ongoing support for our research program on the regulation of biomedical practices entitled “Techno-scientific Innovations, Biomedical Research and Clinical Interventions.” Between 1994 and 1997, the Hannah Institute for the History of Medicine of Associate Medical Services, Inc. (Toronto) provided funds for a more restricted project on visualization in the biomedical sciences, traces of whose results can be seen in chapter 8. The Burroughs Wellcome Fund also contributed decisively to this book by granting to one of the coauthors (P.K.) an award to spend a year at the National Humanities Center, Research Triangle Park, in North Carolina and to the other coauthor (A.C.) a 40th Anniversary Award in the History of Medicine to spend a year in a place of his choice. Additional travel funds were provided to A.C. in 1999 by the Wellcome Institute for the History of Medicine (London) and the Max Planck Institute for the History of Science (Berlin). During 2001, the French Institut National pour la Santé et la Recherche Médicale awarded A.C. a one-year position as a Senior Invited Researcher in the Unit 379 Épidémiologie et sciences sociales appliquées à l’innovation médicale, in Marseilles. Last but not least, both our universities have granted us a sabbatical year during the preparation of this book: P.K. spent it in part at the Mario Negri Institute in Santa Maria Imbaro, Italy (1997–98) and A.C. at the Centre de Sociologie de l’Innovation of the École des Mines in Paris (1996–97).

In addition to funding, good research assistants are an active ingredient of a research project. We would like to single out for special thanks Jean-François Auger, Éline Gauthier, Anne-Julie Houle, Claudio Interdonato, Martha Poon, and Gavin Svensson. Michael Rutherford and Janalyn Prest cleaned up the mess we had left in the unformatted footnotes of our manuscript. Our students Zlatko Anguelov, Eric Francoeur, Yoshio Nukaga, Sébastien Piché, and Andrew Scyner, and postdoctoral fellows Kenton Kroker and Eve Seguin, while not directly involved in research for this book, stimulated our thinking about technology and biomedicine in contemporary and historical perspectives. Carole Smith and Guy L’Heureux of McGill’s Biology Image Centre did a marvelous job scanning and reworking the illustrations used in this book.

Archival collections were a rich source of empirical material for our project and our work there was greatly facilitated by the professional help provided by many archivists. In France, we would like to mention H el ene Chambefort of the INSERM archives in Le V esinet, Louis Cosnier of the CNRS archives in Paris, Michelle Sabourin of the CNRS archives in Gif-sur Yvette, Sylvain Riquier of the Assistance Publique–H opitaux de Paris archives in Paris, and Denise Ogilvie of the Institut Pasteur archives in Paris. In the United Kingdom, we would like to thank for their invaluable help Philip Toms, Records Manager of the Medical Research Council, Dr. David Grant, Scientific Director of the Leukemia Research Fund (LRF) who gave us access to documents held at the LRF headquarters, Miss Frederika A. Phillips, Clerk to the Council of the Imperial Cancer Research Fund (ICRF) (Lincoln’s Inn Fields), Julia Chester, Head of Library and Information Services at the ICRF, Robert J. Moore, Librarian at the National Institute for Medical Research (Mill Hill), and Lesley A. Hall of the Contemporary Medical Archives Centre of the Wellcome Library for the History and Understanding of Medicine, all in London. In the United States, Charles Freiman of the Engineering Institute (New York) graciously opened the doors to the corporate archives. Victoria Harden at the National Institutes of Health (NIH) and Judy Grosberg at the National Cancer Institute (NCI) were instrumental in guiding us to the relevant library and archival material in that enormous biomedical complex. Finally, Mike Rhode of the Army Institute of Pathology (Washington, D.C.) was equally generous with his time.

In addition to archival work, interviews with more than eighty scientists, clinicians, and company officials in the United States, Canada, United Kingdom, France, Germany, the Netherlands, and Italy provided a rich documentary basis for this book. Many of these individuals went out of their way to provide unpublished material, correspondence, advice, and close readings of preliminary chapters. They are, in an important sense, less social science “subjects” than valued collaborators. An appendix at the end of this book, giving the list of those who accepted to be interviewed (a few, repeatedly) for this project, is our way of thanking each of them by name. Without their help and understanding, we could simply not have written this book. We see their collaboration as further proof that the history and sociology of science and medicine need not result in “science wars,” which are more the product of the disgruntled imagination of a few philosophers or scientists turned ideologues.

Earlier versions of “platform sociology” were presented at a number of meetings, namely the 1997 (Tucson) and 1998 (Halifax) meetings of the Society for Social Studies of Science (4S), the 1998 Lisbon conference of the European Association for the Study of Science and Technology (EASST), the 1998 International Conference on Science, Technology and Society (Tokyo, Hiroshima, and Kyoto), and the 2000 meeting of the American Association for the History of Medicine (Bethesda, Md.). Additional presentations of our ideas on platforms as they were taking shape were presented at several invited talks, including those at the Center for the Sociology of Innovation (École des Mines, Paris, 1996 and 2001), the INSERM Unit 158 (Paris, 1996), Centre for Research into Innovation, Culture and Technology (CRICT) Brunel University (Uxbridge, Middlesex, 1999), the Max Planck Institute for the History of Science (Berlin, 1999), the University of Freiburg (1999), the University of Lausanne (2001), the École des Hautes Études en Sciences Sociales (Paris, 2001), the University of Perugia (2001), and the INSERM Unit 379 (Marseilles, 2001). On each of these occasions we profited from the comments and criticisms of the participants.

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Although the material used in this book has been entirely rewritten and refocused around the notion of a biomedical platform, several chapters draw from previous publications. An initial, general overview of our argument was presented in:

Keating, Peter, and Alberto Cambrosio. "Biomedical Platforms." *Configurations* 8 (2000), 337–87. Material reproduced with permission by Johns Hopkins University Press.

Scattered components of our argument, not yet connected by the notion of a platform, were included in the following texts:

Cambrosio, Alberto, and Peter Keating. "Of Lymphocytes and Pixels: The Techno-visual Production of Cell Populations." *Studies in History and Philosophy of Biological and Biomedical Sciences* 31 (2000), 233–70. Material reproduced with permission from Elsevier Science.

Keating, Peter, and Alberto Cambrosio. "Real Compared to What?: Diagnosing Leukemias and Lymphomas." In *Living and Working with the New Medical Technologies. Intersections of Inquiry*, ed. Margaret Lock, Allan Young, and Alberto Cambrosio, 103–34. Cambridge, UK: Cambridge University Press, 2000. Material reproduced with permission from Cambridge University Press.

Keating, Peter, Camille Limoges, and Alberto Cambrosio. "The Automated Laboratory: The Generation and Replication of Work in Molecular Genetics." In *The Practices of Human Genetics*, ed. Michael Fortun and Everett Mendelsohn, 125–42. Dordrecht, Netherlands: Kluwer, 1999. Material reproduced with kind permission of Kluwer Academic Publishers.

Keating, Peter, and Alberto Cambrosio. "Interlaboratory Life: Regulating Flow Cytometry." In *The Invisible Industrialist: Manufacturers and the Construction of Scientific Knowledge*, ed. Jean-Paul Gaudillière and Ilana Löwy, 250–95. London: Macmillan/New York: St. Martin's Press, 1998. Material reproduced with permission of Palgrave Macmillan.

Cambrosio, Alberto, Peter Keating, and Ronald D. Guttman. "New Medical Technologies and Clinical Practice: A Survey of Lymphocyte Subset Monitoring." *Clinical Transplantation* 8 (1994), 532–40. Material reproduced with permission of Blackwell Science Ltd.

Keating, Peter, and Alberto Cambrosio. "'Ours Is an Engineering Approach': Flow Cytometry and the Constitution of Human T-Cell Subsets." *Journal of the History of Biology* 27 (1994), 449–79. Material reproduced with kind permission of Kluwer Academic Publishers.

Cambrosio, Alberto, and Peter Keating. "A Matter of FACS: Constituting Novel Entities in Immunology." *Medical Anthropology Quarterly* 6 (1992), 362–84. Material reproduced with permission of the American Anthropology and Association.

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